

Title (en)
Enclosed-type secondary cell

Title (de)
Gasdichte Sekundärzelle

Title (fr)
Pile secondaire étanche

Publication
EP 0742599 A1 19961113 (EN)

Application
EP 96107294 A 19960508

Priority
JP 11480095 A 19950512

Abstract (en)
An enclosed-type secondary cell comprises a safety valve (5) made of a metal plate which is deformed with an increase of an internal pressure of the secondary cell, a current interrupting means (6) energized when said safety valve (5) is deformed, an annular gasket (15) for holding an outer peripheral flange portion of the safety valve (5), and a disk (17) serving as a support for detaching a welded portion of a lead plate (17) and a safety valve convex portion (9) when the safety valve (5) is deformed. The annular gasket (15) includes a stepped portion (15e) within a bead-treatment area (21), and the disk (17) is fixed at its outer peripheral portion to the stepped portion (15e) of the annular gasket (15). This enclosed-type secondary cell has the current interrupting means which is energized when the safety valve (4) is deformed with an increase of the internal pressure within the enclosed-type secondary cell. Accordingly, the vacant space of the enclosed-type secondary cell is effectively utilized, and without decreasing a secondary cell capacity, the enclosed-type secondary cell is very strong against shock caused when it is dropped. <IMAGE>

IPC 1-7
H01M 2/34; **H01M 2/04**

IPC 8 full level
H01M 10/05 (2010.01); **H01M 50/171** (2021.01); **H01M 50/574** (2021.01)

CPC (source: EP US)
H01M 50/171 (2021.01 - EP US); **H01M 50/574** (2021.01 - EP US); **H01M 50/342** (2021.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)
• [A] DE 1496226 A1 19690424 - SONOTONE CORP
• [A] DE 2907167 A1 19790906 - FURUKAWA BATTERY CO LTD
• [DA] EP 0573998 A1 19931215 - SONY CORP [JP]
• [A] FR 2406899 A1 19790518 - ACCUMULATEURS FIXES [FR]
• [A] PATENT ABSTRACTS OF JAPAN vol. 18, no. 527 (E - 1613)

Cited by
US8497033B2; EP2475026A4; AT521581A1; AT521581B1; WO2020037339A1; US8771867B2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0742599 A1 19961113; **EP 0742599 B1 19990811**; CA 2175174 A1 19961113; CA 2175174 C 20070123; CN 1085415 C 20020522; CN 1138753 A 19961225; DE 69603656 D1 19990916; DE 69603656 T2 20000113; JP 3555240 B2 20040818; JP H08315798 A 19961129; KR 100317439 B1 20020424; US 5738952 A 19980414

DOCDB simple family (application)
EP 96107294 A 19960508; CA 2175174 A 19960426; CN 96105875 A 19960510; DE 69603656 T 19960508; JP 11480095 A 19950512; KR 19960015681 A 19960511; US 64387896 A 19960507